Bonneville Power Administration
Fish and Wildlife Program FY98 Watershed Proposal Form

Section 1. General administrative information

Title **Analyze Ahtanum Creek Storage Project**

Bonneville project number, if an ongoing project 8022

Business name of agency, institution or organization requesting funding
Ahtanum Irrigation District

Business acronym (if appropriate) AID

Proposal contact person or principal investigator:

Name George Marshall
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Phone (509) 249-0226
Fax
Email address

Subcontractors.

Organization	Mailing Address	City, ST Zip	Contact Name
CH2M HILL	3190 George Washington Way, Suite B	Richland, WA 99352	R. V. Haapala
Northwest Hydraulic Consultants, Inc.	16300 Christensen Road, Suite 350	Tukwila, WA 98188	Ed Zapel
Gray & Osborne, Inc.	107 S 3rd Street	Yakima, WA 98901	Maury Block

NPPC Program Measure Number(s) which this project addresses.

NMFS Biological Opinion Number(s) which this project addresses.

Other planning document references.

Subbasin.
Ahtanum Creek

Short description.
Evaluate the feasibility of a multipurpose storage reservoir in the Ahtanum Creek watershed. Potential beneficiaries of the project will include: AID waterusers, Wapato Irrigation Project waterusers, fisheries, wildlife habitat, & recreation.

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
X	Anadromous fish		Construction	X	Watershed
*	Resident fish		O & M		Biodiversity/genetics
*	Wildlife		Production		Population dynamics
	Oceans/estuaries		Research	*	Ecosystems
	Climate		Monitoring/eval.		Flow/survival
	Other	*	Resource mgmt		Fish disease
		X	Planning/admin.		Supplementation
			Enforcement	*	Wildlife habitat en-
			Acquisitions		hancement/restoration

Other keywords.
Storage, water supply, irrigation, stream restoration, flood control, recreation

Section 3. Relationships to other Bonneville projects

Project #	Project title/description	Nature of relationship

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Define Project Features	a	Conceptual layout
2	Environmental Scoping	a	Agency consultations
3	Hydrologic Analysis	a	Determine water supply & needs
4	Geologic Analysis	a	Subsurface investigations
5	Hydraulic Configuration	a	Define control structures needed

6	Civil Engineering	a	Sitework and utilities
7	Structural, Mechanical, Electrical	a	Prepare concept of equipment
8	Economics, Costs, Schedules	a	Determine financial aspects of project

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	1/1998	2/1998	4.00%
2	1/1998	4/1998	10.00%
3	2/1998	4/1998	10.00%
4	4/1998	11/1998	39.00%
5	5/1998	7/1998	11.00%
6	5/1998	9/1998	6.00%
7	6/1998	11/1998	13.00%
8	8/1998	12/1998	7.00%
			TOTAL 100.00%

Schedule constraints.
The project will be affected by the ability of reviewing agencies to develop policies and define required compliance procedures.

Completion date.
The Preconstruction Feasibility Analysis phase of the project could be completed in 1998. Other funding requirements will follow in subsequent years.

Section 5. Budget

FY99 budget by line item

Item	Note	FY98
Personnel	AID Staff	$10,000
Fringe benefits		$5,000
Supplies, materials, non-expendable property		
Operations & maintenance		
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		
PIT tags	# of tags:	
Travel		$2,000
Indirect costs		

Subcontracts	Consulting Firms	$785,000
Other		
TOTAL		$802,000

Outyear costs

Outyear costs	**FY99**	**FY00**	**FY01**	**FY02**
Total budget				
O&M as % of total				

Section 6. Abstract

The Ahtanum Irrigation District (AID) has identified the need to develop additional water supplies for various users within the Ahtanum Creek watershed. The proposed multipurpose water storage project would provide a reliable supply to: AID waterusers, Wapato Irrigation Project users, fisheries, and wildlife habitat. In addition, the project would provide limited amounts of flood control, fire protection, and recreation. The reservoir is expected to have a storage capacity of approximately 20,000 acre feet and would be located in a small sub-basin adjacent to Ahtanum Creek.

Section 7. Project description

a. Technical and/or scientific background.

Ahtanum Creek is known to have very high flow rates during winter and spring runoff periods. These events generally occur when accumulated snow melts rapidly. The short duration high flows quickly subside at the same time that the demands for water are increasing. By the time the crops need irrigation, the stream flow has diminished significantly. Most years, Ahtanum Creek has no flow in critical sections after July.

The proposed storage project would make water available at times when it could benefit irrigated agriculture as well as fish and wildlife. By reducing the flows during the peak runoff period, the property and habitat damage that regularly occurs would be less severe.

b. Proposal objectives.

It is the objective of the proposed multipurpose storage reservoir to provide additional water for agriculture, fisheries, and wildlife habitat. Other incidental benefits such as recreation, economic development, and fire protection would be produced by the project.

c. Rationale and significance to Regional Programs.

Storage of stream flows that are in excess of the instream needs has been successfully used to maximize the utilization of water resources. In the case of Ahtanum Creek, the

peak flow not only exceeds the instream needs but it causes severe environmental and property damage on a regular basis. The multipurpose storage project appears to an effective way to use the water resource more efficiently. The technology of multipurpose storage is well proven. The proposed analysis will help determine if the environmental and other benefits justify the costs.

d. Project history

The Ahtanum Irrigation District and all of the other users of water in the Ahtanum Creek basin have suffered from water shortages since development began near the turn of the century. The water shortage has limited the productivity of the agricultural lands and the local economy has suffered. This storage project has the potential of improving the economic conditions while enhancing the stream ecosystems.

e. Methods.

The Preconstruction Feasibility Analysis being proposed is the first step toward implementation of the multipurpose reservoir project. The work will involve many areas of analysis that are beyond the capability of the AID staff to perform. Specialized consultants familiar with the development of projects of this size and complexity will be retained to complete the work. Many organizations and regulatory authorities will have input to the planning process. It is proposed that these agencies be involved in the project from its beginning. Since the project is in and will serve a moderately populated area, public involvement will be an important input factor. The completed Preconstruction Feasibility Analysis will serve as a decision making tool to determine if the project should be moved forward. It will define the projects benefits and identify any negative impacts before large amounts of money are expended.

f. Facilities and equipment.

The AID will not require any additional facilities or equipment to manage the completion of the Preconstruction Feasibility Analysis. As future elements of the project move forward, the District will require additional facilities, staff and equipment.

g. References.

Lentz, C.R. 1974. Review of Yakima Project Water Rights and Related Data.

Yakima County Comprehensive Plan

Yakima River Basin Water Enhancement Project

Section 8. Relationships to other projects

The proposed project is consistent with the goals of the Yakima Basin Enhancement project and will help meet some of the instream fish and wildlife needs of the Yakima River Basin. By controlling excessive runoff flows, the water quality in the Yakima River will be improved at certain times of the year. Consistent flows in Ahtanum Creek will allow fish and wildlife to return to the stream.

Section 9. Key personnel

The project will be managed by the staff of AID with assistance from specialized consultants. The first phase of the project is within the ability of the current staff to manage. As the project moves ahead into the pre-design, design, construction, and operation phases, more staff will be required by the AID.

Section 10. Information/technology transfer

The planning process that is proposed for this Preconstruction Feasibility Analysis is an example of the steps that could be followed by proponents of other storage projects. The process could be applied in other parts of the basin. This is an example of a proponent motivated by a strong need for more water taking the initiative to move a project forward.